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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,830	04/30/2001	Byoung Ku Kim	8733.310.00	1003

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EXAMINER

AKKAPEDDI, PRASAD R

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/843,830

Applicant(s)

KIM ET AL.

Examiner

Prasad R Akkapeddi

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07/30/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 6, 7-8 (new), 11-12 (new) and 15 (new) are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (Kim) (U.S. Patent No. 6,175,396).

As to claims 1 and 6: Kim discloses a liquid crystal display device comprising optical sheets (3) included in a backlight assembly (lamp and 2) (col.6 lines 32-34), a main frame (1) mounted with the backlight assembly and at least one shaft member (32) installed at the main frame to fix the optical sheets (Fig. 4). Kim also discloses that the optical sheets (3) included in the backlight assembly having holes (300) therein configured to affix to the shaft (Fig. 4).

As to claims 2-3: Kim discloses that each of the optical sheets (3) is provided with a hole (104) through which the shaft member (32) passes (col.7, lines 29-30) as recited in instant claim 2. Kim also discloses that the main frame is provided with at least one stepped hole (200) in which the shaft member is provided as recited in instant claim 3.

As to claims 7 and 12: Kim discloses that the shaft member (32) has a protrusion (33) having a width (at the tip) smaller than the width of the shaft member (32) and when assembled will extend through the optical sheets as shown in Fig. 5.

As to claim 8: Kim also discloses each of the optical sheets (3) is provided with a hole (104) through which the protrusion extends (Fig. 5).

As to claims 11 and 15: Kim also discloses a main frame (1) having a hole (200) through which the protrusion (33) extends and a panel guide (not

Art Unit: 2871

numbered), where the indentation exists can clearly be seen in Fig. 4 where the optical sheets (3) are guided into the main frame.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Yarita et al. (Yarita) (U.S. Patent No. 6,411,353).

Kim discloses a panel guide (50) for surrounding the backlight assembly and the main frame (1). Kim however, does not disclose a silicon pad or a silicon pad provided with a hole.

Yarita on the other hand, in disclosing a mounting configuration of a liquid crystal panel comprising several optical sheets (SPS, PRS, GLB, RFS and PNL), a main frame (MCA), a panel guide sheet (SHD), discloses sleeves (pads) (SLV) with small holes that are made out of silicon rubber (col. 24. lines 1-13).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the specific sleeves (pads) as disclosed by Yarita to the liquid crystal panel of Kim for alignment of the sheets with the main frame (co. 24, lines 8-9).

6. Claims 9-10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim.

Kim discloses holes having circular shapes (104 and 200), the protrusion (33).

Kim's protrusion has a triangular cross-section and not a circular cross section but fits through the above holes and is functionally equivalent to the circular cross-section of the protrusion as recited in claims 10 and 14.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the shaft member having a circular cross-section protrusion to fix optical sheets for preventing wrinkling of the sheets and thereby preventing the displaying performance which may otherwise occur when the sheets are fixed using conventional fixing devices, such as tape (col. 1, lines 6-13).

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. It is respectfully pointed out that the use of shaft members having circular cross-sections is quite common in many mechanical systems as evidenced in the prior art by Ha et al. (U.S. Patent No. 6,593,979) where Ha discloses shaft members (794) having protrusions with circular cross-sections (792) (Fig. 16) for facilitating the secure fastening of LCD modules.

Response to Arguments

8. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection and the following responses.

Applicant's argument No. 1 (page 5, lines 12-15): None of the cited references including Kim and Yarita singly or in combination teach or suggest the feature 'at least one shaft member installed at the main frame to fix the optical sheets'.

Examiner's response to argument No. 1: When the LCD is assembled the shaft member (32) will be installed at the main frame as can be seen in Fig. 5 of Kim. Besides, the teachings of Kim are directly applicable since the shaft member (32) with the protrusion (33) attaches the optical sheets to the main frame. Hence after assembly, it would be hard to distinguish whether the shaft is installed in the main frame or installed in some other part of the device and then fixed to the main frame. It would be functionally equivalent.

Applicant's argument No. 2 (page 5, lines 19-22): Kim discloses a small gap and thus the sheets are not fixed.

Examiner's response to argument No. 2: Kim's teachings apply to firmly fixing (col. 9, lines 8-10) of the optical sheets to the main frame using a shaft member. The gap exists only to accommodate any thermal expansion of the thermal sheets, thereby eliminating the possibility of wrinkling caused by thermal expansion (col. 9, lines 1-15).

Applicant's argument No. 3 (page 6, lines 4-7): None of the prior art teaches 'optical sheets included in the backlight assembly having holes therein configured to affix to the shaft'.

Art Unit: 2871

Examiner's response to argument No. 3: The holes (104) in the optical sheets (3) can clearly be seen in Fig. 4 and when the shaft member (32) is engaged through these holes and into the hole (200) in the main frame, the optical sheets will be firmly fixed to the main frame (col. 9, lines 8-10).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prasad R Akkapeddi whose telephone number is 571-272-2285. The examiner can normally be reached on 7:00AM to 5:30PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BRA

Prasad R Akkapeddi, Ph.D
Examiner
Art Unit 2871

TARIFUR R. CHOWDHURY
PRIMARY EXAMINER